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Editing ERTS-1 Data to Exclude Land  
Aids Cluster Analysis of Water Targets

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The ERTS-1 Coastal Analysis Team has determined that an increase in the number of spectrally distinct coastal water types is achieved when data values over the adjacent land areas is excluded from the processing routines. This finding resulted from an automatic clustering analysis of ERTS-1 system corrected multispectral scanner (MSS) scene 1002-18134 of 25 July 1972 over Monterey Bay, California. When the entire study area data set was submitted to the clustering only two distinct water classes were extracted. However, when the land area data points were removed from the data set and resubmitted to the clustering routine, four distinct groupings of water features were identified. Additionally, unlike the previous separation, the four types could be correlated to features observable in the associated ERTS-1 imagery. This exercise demonstrates that by proper selection of data submitted to the processing routine, based upon the specific application of study, additional information may be extracted from the ERTS-1 MSS data.

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